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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,796	10/22/2001	Lesley O. Bond	5750-006	5617

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EXAMINER

STEPHENSON, DANIEL P

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 01/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,796

Applicant(s)

BOND, LESLEY O.

Examiner

Daniel P Stephenson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) 42-47 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 48-55 is/are allowed.
- 6) ☒ Claim(s) 1-8, 14, 19, 22-28, 34, 39 and 56 is/are rejected.
- 7) ☒ Claim(s) 9-13, 15-18, 20, 21, 29-33, 35-38, 40, 41 and 57 is/are objected to.
- 8) ☒ Claim(s) 42-47 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-41 and 48-57, drawn to a perforating apparatus, classified in class 166, subclass 55.
 - II. Claims 42 and 43, drawn to a valve mechanism, classified in class 166, subclass 316.
 - III. Claims 44-47, drawn to a method of flowing fluid from a tubular structure, classified in class 166, subclass 305.1.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because many valves can be used to accomplish what the valve of Group II is doing within the perforator apparatus of Group I. The subcombination has separate utility such as actuating any number of well tools, as implied by the preamble of claim 41.
3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP

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§ 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product, such as another perforating apparatus or high-pressure injector.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Mary M. Lee on 12/19/02 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-41 and 48-57.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 42-47 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

6. Claim 8 is objected to because of the following informalities: on line 4 of the claim there is a space within the word opposingly. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 4 recites the limitation "tool" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 2, 14, 22, 24 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Schellstede '173. Schellstede '173 discloses an apparatus for perforating a tubular structure in which the piercing member is moved from a first position to a second piercing position through the casing, i.e. tubular structure. It is contained within a housing that has an inlet and is supported within a tubular structure. The piercing member contains a fluid flow path that is continuous with the flow path from the inlet of the housing. A control assembly controls when the piercing member moves from the first position to the second position and back. The first end of the housing is adapted to be connected to an elongate conduit which can move axially and rotatably within the casing to position the perforation apparatus. The perforating assembly further comprises a cylinder (256) in which the piercing member is slidably supported. The movement of the piercing member is driven by a pressurized fluid reservoir (19) acting on a piston (306) within the cylinder. The control assembly has a valve that controls the flow of pressurized fluid from the reservoir to the piston. There is a friction assembly (24) which is sized to frictionally engage the well as the housing is pushed through. There is also a pillow plate (350) located opposite the piercing member to cushion the apparatus when it is operated.
12. Claims 1, 2 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Schlumberger '929. Schlumberger '929 discloses an apparatus for perforating a tubular structure

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in which the piercing member is moved from a first position to a second piercing position through the casing, i.e. tubular structure. It is contained within a housing that has an inlet and is supported within a tubular structure. The piercing member contains a fluid flow path (37',38') that is continuous with the flow path from the inlet of the housing. A control assembly controls when the piercing member moves from the first position to the second position and back. The first end of the housing is adapted to be connected to an elongate conduit (43) which can move axially and rotatably within the casing to position the perforation apparatus. The perforating assembly further comprises a cylinder (26') in which the piercing member is slidably supported. The movement of the piercing member is driven by a pressurized fluid reservoir (20') acting on a piston (27) within the cylinder.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 14 and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schlumberger '929. Schlumberger '929 shows all the limitations of the claimed invention, except, it does not expressly state that there is a valve controlling the inlet of fluid from the reservoir into the cylinder piston. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a valve

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at this location, since it is notoriously conventional in the valve and piston arts for valves to control the flow of pressurized fluid to a piston.

15. Claims 3, 4, 6, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schellstede '173 or Schlumberger '929. Schellstede '173 or Schlumberger '929 show all the limitations of the claimed invention, except, Schellstede '173 or Schlumberger '929 does not disclose that the elongated conduit has a releasable lock assembly in which in one position it is fixed relative to the housing, and in a second position it is axially mobile relative to the housing. It is notoriously conventional in the art of wells and wellbore to use a rotating drill string for attachment of a variety of well tools, and often these drill strings are installed with a j-slot in such a manner that they can be locked relative to the casing they are being lowered into. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a j-slot locking mechanism on the apparatus of Schellstede '173 or Schlumberger '929.

16. Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schellstede '173 in view of Sutliff. Schellstede '173 shows all the limitations of the claimed invention, except, it does not show that the friction member is a bow string centralizer. Sutliff uses a bow string centralizer in combination with a perforating assembly to center it within the casing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the bowstring centralizer of Sutliff with the apparatus of Schellstede '173. This would be done because it would decrease the mechanical parts and lower the chance of breakdown within the apparatus.

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17. Claims 7, 8, 19, 27, 28, 39 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schellstede '173 in view of Brown. Schellstede '173 shows all the limitations of the claimed invention, except, it does not show that there is a back-up plate which is connected to a piston, so that it can act in the opposite direction from the piercing member. Nor does it disclose that there is a ring shaped packer around the piercing member to be in use when the back-up plate is activated through the piston controlled by a valve, wherein the piston is in fluid communication with a pressure reservoir. Brown discloses a well tool which is placed against the side wall of a casing. The well tool is moved to the wall through the use of pistons that are in communication with a pressure reservoir. Opposite the pistons is a ring shaped packer that insures a fluid seal around the well tool to be utilized. It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the piston mechanism of Brown to the Pillow plate of Schellstede '173. This would be done so that a larger range of casing widths would be able to be perforated, by using the pistons to travel a greater diameter wellbore.

Allowable Subject Matter

18. Claims 48-55 are allowed.

19. Claims 9-13, 15-18, 20, 21, 29-33, 35-38, 40, 41, and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Allarie et al., Schellstede '111, Deardorf, Peters et al., Braziel, Mcqueen et al.,

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Schellstede et al. '384, Schellstede et al. '129 all show similar elements to those of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel P Stephenson whose telephone number is (703) 605-4969. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on (703) 308-2151. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1020.

Daniel P Stephenson
Examiner
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DPS *aps*
December 20, 2002


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